

**Lower Passaic River Restoration Project  
Subcontractor Monthly Progress  
HydroQual, Inc.**

Reporting Period: 12/19/05 through 01/20/06

Date Submitted: 01/20/06

Submitted By: HydroQual (Paul Anid)

**Activities, Progress and Deliverables this Period**

**Project Documentation**

- Submission of progress report.
- Submission of EVs
- Finalized HydroQual's corrective action plan

**Project Communications**

- Participation on January 6<sup>th</sup>, 2006 of HydroQual – Tom Gallagher and Ed Garland - in conference call on Dundee Dam sampling.
- Meeting at USEPA HQ to present scheduling alternatives – Monday December 19<sup>th</sup>.

**Hydrodynamic Modeling**

Model Calibration:

- Processed model results in 1995 and 1996 water years and compared to TSI hydrographic survey data: processed transect ADCT, temperature and salinity data and compared with model results; Model-data correlation statistic; harmonic analyses of tidal elevations and currents
- Processed Rutgers 2000-2003 ADCP sensor data and compared with model results: review the results and continuing data reduction for better comparison
- Model input for 1995-2004 prepared and model rerun.
- Preparing hydrodynamic reports:
  1. Description of model forcing data: for calibration periods (1995-6 and 2001-2004)
  2. Model-Data calibration procedures:
    1. Plots of elevations, current velocity, temperature and salinity monitoring stations
    2. Plots of model-data comparison
  3. Statistical analyses for model skill assessment: for data collected in Passaic, Newark Bay and Kills by TSI and Rutgers.

Interim Remedial Measures:

- Prepared the FEMA flood plain maps on the existing coastline file
- Start designing computational grid:

**Sediment Transport Modeling.**

- Outcome of the solids mass balance assessment and calculation of sedimentation rates in the Passaic River presented internally on January 20<sup>th</sup>, 2006. Work includes also bathymetric data comparisons and data simulations as a function of depth of particle mixing.
- Arrangement for a conference call or meeting with MPIN to present results and compare work will be initiated next week.
- Analysis of grain size data of Sedflume experiments on hold pending discussions with Craig Jones.
- Flocculation protocol work in progress between Kevin Farley and Bill McAnally.

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**Technical or Schedule Problems Encountered this Period and Solutions Implemented**

- None

**Activities Anticipated Next Period**

**Project Documentation**

- Preparation of progress report.

**Project Communications**

- Monthly team conference call.

**Hydrodynamic Modeling**

- Continuation of report drafting.

**Sediment Transport Modeling**

- Arrangements for a combined HQI-MPIN conference call or meeting to discuss solid balance/sedimentation rates calculations.